

5398

5398

Form 504 Ed. June, 1928	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. Patton, Director	
<div></div>	
State: Texas	
DESCRIPTIVE REPORT	
<del>Topographic</del> Hydrographic	Sheet No. 11 5398
LOCALITY	
North Portion of	
Galveston Bay	
Turtle Bay and Trinity River	
1933	
CHIEF OF PARTY	
Earl O. Heaton	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 11

REGISTER NO. 5398

State Texas

General locality North Portion of Galveston Bay. *app. U.S.*

Locality Turtle Bay and Trinity River.

Scale 1:10,000 Date of survey February - March, 1933

Vessel Launch "Gladys" and skiffs

Chief of Party Earl O. Heaton

Surveyed by J. S. Morton

Protracted by J. S. Morton, C. W. O'Melveny

Soundings penciled by W. L. Moore

Soundings in ~~fathoms~~ feet

Plane of reference M. L. L. W. M. L. W.

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by R. B. Krum

Verified by R. B. Krum (Visual inspection by L. S. Straw)

Instructions dated November 5, 1932

Remarks: Project HT - 118

DESCRIPTIVE REPORT  
TO ACCOMPANY SHEET 11  
TURTLE BAY

Date of Instructions:

Instructions for this work were dated Nov. 5, 1932  
(Project HT-118).

Survey Methods:

This entire sheet with the exception of the work in Trinity River, was accomplished by using a skiff with outboard motor and sounding pole graduated in feet. The sounding pole had a plate 6 inches in diameter at the bottom to prevent it sinking into the soft bottom. The Trinity River was sounded by using a launch and lead line graduated in feet. The lead had a plate attached to bottom to prevent sinking into the mud.

Discrepancies:

On the n day (green skiff) the positions 7 to 16, at the boat slip in Anahuac, were affected because of the extremely large angular difference between the stations observed and the focal point of the sextants and plotted too far south. Positions 7 and 8 were rejected and the location of the other positions held by means of a comparison between the topography of the slips and the depths obtained; there was only one possible location for these positions.

Certain soundings and positions on the a day (green skiff) were left off the smooth sheet because the area affected was covered thoroughly by soundings on Sheet 21. These particular positions have been noted in the record books where affected.

Channels:

There are only two channels on this sheet and neither of them are used very extensively. The more important of the two is the Trinity River and the depth in this river is controlled by the Trinity River channel on Field Sheet #21. <sup>(5379)</sup> The controlling depth is now being dredged to 6 ft. Small lumber barges and small boats from Anahuac, drawing about 3 ft. of water, are principally the boats which use the Trinity River. The other channel is a channel 50 ft. wide across Turtle Bay from the Trinity River to Turtle Bayou. The controlling depth in this channel is 2½ ft. and it is principally used by fishermen and a small lumber launch in Turtle Bayou. These boats draw approximately 2 ft. of water.

Comparison with Previous Surveys:

The entire water area in Turtle Bay has shoaled considerably since previous surveys were made. This is due to the fact that Turtle Bay has been separated from Trinity Bay by an earthen dam, with the exception of a small entrance, and this has allowed the Trinity River and ~~Turtle Bay~~ to deposit a great deal of silt in Turtle Bay.

The depths in Trinity River have become deeper in some places while it has shoaled in others. The depths in Middle Pass have shoal-

*Bayou*

ed until there is no water at low tide where it empties into Trinity Bay. The depths in Main Pass could not be fully investigated because the lower end of the Pass was completely jammed with logs. The depths in Trinity Bay eastward from Lawrence Cove have shoaled considerably since previous surveys were made.

On the west side of the Trinity River channel from Anahuac south to Bn. B no soundings were taken, as the water was too shallow. At low tide a great part of the area becomes a mud flat.

Geographic Names:

See report for topographic sheet "A".

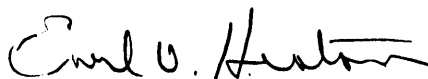
Statistics:

Total Number of Positions -----	1013
Total Number of Soundings -----	6538
Statute Miles of Sounding Lines Plotted -----	131.3

Men in Charge of Hydrography:

Lieut. J. S. Morton was the officer in charge of most of this hydrography, but he was detached from the party before this report could be written.

G. S. Tinsley, an observer, had charge of a small part of the work.



Earl O. Heaton,  
Chief of Party, C. & G.S.

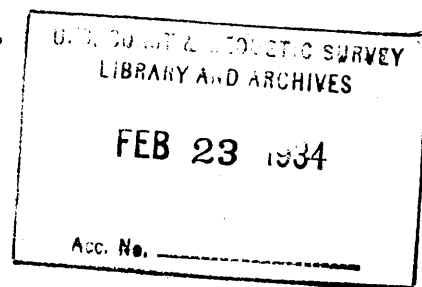
Note: A list of landmarks is attached to the D.R. of T-482/(1933).

*Heaton*

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DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

February 16, 1934.

To: The Director,  
Coast and Geodetic Survey,  
Washington, D. C.

From: Earl O. Heaton, Lieut., C. & G. S.

Subject: Inspection and approval of field records  
and smooth sheet #11.

Smooth hydrographic sheet #11 and re-  
cord books have been inspected and approved by  
me.

*Earl O. Heaton*  
Earl O. Heaton,  
Lieut., C. & G. S.

LAC

June 21, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
6 volumes of sounding records for

HYDROGRAPHIC SHEET 5398

Locality Turtle Bay and Trinity River, Galveston Bay, Texas

Chief of Party: E. O. Heaton

Plane of reference is mean low water, reading

1.7 ft. on tide staff at Old River

2.6 ft. below B. M. 1760 J

1.2 ft. on tide staff at Turtle Bay

4.6 ft. below B.M. 1

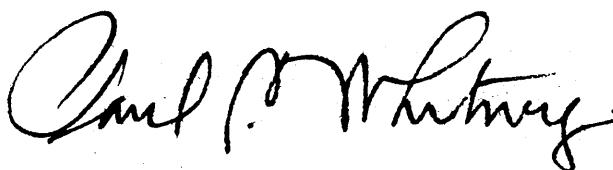
3.0 ft. on Trinity tide staff at Anahuac

9.0 ft. below B.M. 2

2.5 ft. on tide staff on Beacon "A" at Round Point

19.4 ft. below B.M. 1

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents

1

INSPECTION of H 5398  
by L. S. Straw.  
Survey of Turtle Bay and Trinity River  
(Hand lead and pole soundings)  
by E. O. Heaton 1933.

1. Records.

The records conform to the requirements of the Hydrographic Manual. Part of the records of Field sheet 11 (H 5398) have been copied into the records of Field sheet 21 (H 5399) by the Field.

2. Character of work.

The plan, character and extent of the development fulfill the requirements of the Hydrographic Manual. The cross lines are adequate for this survey.

3. Protracting and Plotting.

(a) A visual check indicates that the protracting done by the Field is satisfactory.

(b) In inking - the one half foot soundings should be inked up to one foot; but omitted where over one foot except in critical places in the channels.

(c) The advisability of drawing the three foot curve will be considered at the time the sheet is reviewed. *This curve will not be added.*

4. Discrepancies.

(a) The location of the log boom Lat.  $29^{\circ}-47'$  Long.  $94^{\circ}-42.35'$  on the Hydrographic sheet H5398 was made to coincide with that of the Topographic sheet T 4821. The position, 23 A (red) was revised since its location was dependent upon that of the log boom - soundings affected were adjusted.

(b) Topographic sheet T 4821 shows an island of drift wood, mud and sand at the junction of Old River with Trinity River. No reference as to the location of the island as described was found in the records. It has been transferred in pencil to the Hydrographic sheet by the undersigned, and is to be erased or inked in at the discretion of the reviewer.  
*Island has been inked and is accompanied by an appropriate note added.*

5. Remarks

For information concerning channels and comparison with previous surveys see Descriptive Report by the Field under these headings.

Respectfully submitted



Leo S. Straw.

July, 2, 1934.

# VERIFICATION REPORT H - 5398

## Records:

The records are neat and legible. They conform to the General Requirements except for the following:-

1. Part of the records were transferred to the records of H-5399 making ~~for~~ lapses in the consecutive plotting of positions on green b day.
2. Changes in time interval were not always noted with a distinctive mark.
3. The remarks were not sufficiently complete in some cases. For instance the remark "Point of bar 10m left" at position 82 $\frac{1}{2}$  (red) day is not clear. Neither are the remarks sufficient to clearly indicate all the areas foul with logs.

Lat. 29° 48' 2", long. 94° 43' 6"

## Protracting:

The field protracting was checked in the office by visual inspection by Mr. Straw. His report appears under this same cover. In addition the verifier checked 6 positions and revised 1.

## Field Plotting and Drafting:

The sounding lines were well drawn at turns in the boat's course, and generally speaking the field plotting and drafting were well done. There are however a few exceptions:-

1. The spacing of soundings in some of the small passes and bayous was carelessly done.
2. Many erasures were made and were left in such manner that the ink blotted when soundings were drawn. However the paper appears to be of unusually poor quality for no little difficulty was encountered in blotting and "picking up" over the entire sheet.
3. ~~No geographic datum was given.~~
4. Except for the zero curve none of the curves were drawn by the field draftsman.
5. The transfer of topography from the topographic sheet was not too carefully done since several small islands were omitted.

## Office Plotting and Drafting:

1. The soundings were respaced by the verifier in those places where the time spacing did not check well.
2. A decision was made by higher authority to depart from the regulations of the Hydrographic Manual (which regulations were pointed out in paragraph 3b of the Inspection Report prior to this special decision) to the effect that soundings in Turtle Bay and in the northern part of Galveston Bay



should be inked in feet and half feet. With such shallow depths as these a half foot becomes an appreciable portion of the total depth. ✓

3. Geographic names which appear on the chart were inked. Many names were left in pencil pending a decision by higher authority as to whether or not they should be inked. See Descriptive Report of T-4821. The name Galveston Bay was not inked since there is some question as to whether or not this northern portion of Galveston Bay should be called Trinity Bay, ✓

*These names have now been inked. [unclear]*

#### Crossings:

Crossings are all in good agreement except for the 16 foot sounding at position 83 (red) a day among soundings of 21 and 24 feet. Nothing could be found wrong with this position. It checks perfectly with the boat sheet. However it is possible that signal "12" actually was used instead of signal "13". If the position were plotted using signal "12" instead of "13", agreement of soundings would be very good but there was not sufficient proof for changing the position. ✓

*Accepted as recorded & plotted - [unclear]*

#### Comparison with Other Data:

The hydrographic sheet checked well with the boat sheet. ✓

The small islands omitted by the field draftsman in transferring topography from T-4821 were added by the verifier such that now the topographic sheet and the hydrographic sheet are in agreement. The island mentioned in paragraph 4b of the Inspection Report was inked in since it is thought that the remark "Point of bar 10m left" at position 82½ red a day (see paragraph 3 under Records of this report) is a reference to the point of the island originally shown only on the topographic sheet. But if this is true then the two points are not in agreement. Position 82½ red a day is correct as plotted, although it is barely possible that signal "12" actually was used instead of signal "13". However there is not sufficient proof to alter either the island or position 82½. ✓

*Island and note have been plotted as shown on the top. sheet and as recorded in the [unclear] records.*

#### Curves:

The usual depth curves could be drawn, although there are not enough soundings to fully define the curves in many places so only indications of the curves are shown. ✓

With regard to paragraph 3c of the Inspection Report, it has been decided by higher authority that a three foot curve shall not be drawn at present. Its advisability may be considered later. ✓

Junctions:

This sheet joins H-5399 on the south, but no junction was made since H-5399 is not yet verified. ✓

Remarks:

It will be noted that many of the smaller passes and bayous are either partially or completely blocked with logs at their entrances. ✓

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "R. B. Krum".

July 19, 1934

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. .5398

The following statistics will be submitted with the  
cartographer's report on the sheet:

Number of positions on sheet	1013
Number of positions checked	16
Number of positions revised	2
Number of soundings recorded	6538
Number of soundings revised	67
Number of signals erroneously plotted or transferred	none

Date:..... July 19, 1934 .....

Cartographer:..... *R. B. Krum* .....

Verification of protracting

~~Verification of inking of rocks & shoals~~ by

L. S. Straw

Time: 10½ hrs.

Verification of inking by

R. B. Krum

Time: 83 hrs

Review by H. W. Murray

Time: 10 hrs.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5398 (1933).

Turtle Bay and Trinity River, North Portion Galveston Bay, Texas.  
Instructions dated November 5, 1932 (E. O. Heaton).  
Surveyed February-March 1933.

Hand Lead and Pole Soundings - 3-Point Control on Shore Signals.

Chief of Party - E. O. Heaton.  
Surveyed by - J. S. Morton.  
Protracted by J. S. Morton; C. W. O'Melveny.  
Soundings penciled by W. L. M.  
Verified and inked by - L. S. Straw; R. B. Krum.

1. Condition of Records.

The records are neat, legible and conform to the requirements of the Hydrographic Manual except as noted below:

- a. The name of the leadsman was not consistently entered at the beginning of each day's work (par. 64b).
- b. Topographic features outside the high water line were not transferred in full to the smooth sheet. Several small islands had been omitted and were added in the office.
- c. Offshore signals were shown without the proper topographic feature. All were identified in the office with the exception of signals Tri, Check, Sprig and Kit. These are all close inshore and have no particular importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project with the exception that the work was not extended up Trinity River so as to include the vicinity of Wallisville as shown on Chart 1282. The source of the present charted soundings in this river could not be ascertained. (See par. 7, this review).

3. Sounding Line Crossings.

Such cross lines as were run are in good agreement with the main system of lines.

4. Depth Curves.

The 0, 6, 12 and 18 foot curves were drawn only where the hydrography afforded a clear and reasonable delineation.

5. Junctions with Contemporary Surveys.

- a. The junction on the south with H. 5399 (1933) will be considered in the review of that sheet.

6. Comparison with Prior Surveys.

a. H. 470 (1855).

Comparison of soundings between this survey and the new survey (H. 5398 (1933) shows considerable change. Some of the changes are natural whereas others are artificial. (See Chief of Party's Report for further details).

b. There are no other previous surveys in this vicinity.

7. Comparison with Chart No. 1282.

a. The source of the charted soundings in Trinity River could not be identified on the "Standards". They are probably from a U. S. Engineers survey and were first charted between the months of February and September, 1908 on Chart No. 204 which was subsequently superseded by Chart 1282. The controlling depth in this river is limited by the entrance channel shown on H. 5399 (1933) which is now being dredged to a controlling depth of 6 feet. These sdys  
since found to  
originate with  
U.S. Engineers  
blueprint  
No. 10487 (1905).  
H.W. Murray  
Oct., 1934

8. Field Plotting.

The field protracting and plotting was accurate and conform to the requirements of the Hydrographic Manual except as follows:

a. Recorded time intervals were not always strictly adhered to. (Par. 147).

b. Many erasures on the smooth sheet were made and left in such a manner that the ink spread when soundings were inked.

9. Additional Field Work Recommended.

This survey is complete, no additional field work is required.

10. Superseding Previous Surveys.

Within the area covered, the new survey (H. 5398 - 1933) supersedes the following survey for charting purposes:

H. 470 (1855) In part.

11. Reviewed by - Harold W. Murray - July 31, 1934.

Inspected by - A. L. Shalowitz.

Examined and approved:

*K.T. Adams*  
K. T. Adams,

Chief, Section of Field Records.

*L.O. Soltan*  
Chief, Division of Charts.

*B. Borden*

Chief, Section of Field Work.

*G. Hude*

Chief, Division of H. & T.